



Attorney Docket No. 017399-0202

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Gernot VON HAAS
Title: METHOD AND APPARATUS FOR THE MANUFACTURE
OF CHIP BOARDS AND FIBER BOARDS
Appl. No.: 10/047,984
Filing Date: 01/17/2002
Examiner: Monica A. Fontaine
Art Unit: 1732

DECLARATION OF PROF. DR. FRANK KRAFFT

I, Prof. Dr.-Ing. Frank Krafft, a citizen of the Federal Republic of Germany, residing at Dachauerstrasse 153, D-80335 München, GERMANY, declare and state that:

1. I graduated from University of Bochum with a PhD 1990 in material science.
2. From 1991 to 1994, I worked for Technischer Überwachungsverein (Technical Inspection Authority) as a technical surveyor for material science and welding and welding constructions. Since 1995 I worked as a professor at the University of Applied Sciences in Munich. I am teaching material science and strength of materials. Further on I am working as a consultant and assist the research and development compartments of several companies in inquiries for construction, material science and strength of materials.
3. My special field of technology is material science, with particular focus on high and low temperature applications of steel (high and low alloyed) and casted iron.
5. Based on my 15 years of experience in the above-mentioned field of material science and welding, I have a good understanding of how a person of ordinary skill in the art of material science would think and what he would do when trying to solve a particular problem.
6. I have reviewed and understand:
 - (a) the above-captioned U.S. Patent Application No. 10/047,984;
 - (b) an Office Action, which pertains to the above-captioned U.S. Patent Application No. 10/047,984 and which was mailed by the Examiner on February 24, 2005;
 - (c) U.S. Patent Nos. 3,776,538 ("Beck"), 4,933,125 ("Reiniger"), 5,538,676

("Bielfeldt-I"), and 5,762,980 ("Bielfeldt-II"), all of which were cited by the Examiner in the above-mentioned Office Action;

(d) a "Properties of Metal" table in the "Engineer's Edge", which was cited by the Examiner in the above-mentioned Office Action; and


(e) a "Material Selection and Properties" document by Melles Griot, which was cited by the Examiner in the above-mentioned Office Action.

7. In my informed opinion and with regard to the "approximately equal" limitation set forth in claim 1 of the above-captioned U.S. Patent Application No. 10/047,984, a person of ordinary skill in the art would not consider the thermal expansion coefficient of aluminum (*i.e.*, $24 \times 10^{-6}/^{\circ}\text{C}$) to be "approximately equal" to the thermal expansion coefficient of steel (*i.e.*, $11 \times 10^{-6}/^{\circ}\text{C}$ to $17 \times 10^{-6}/^{\circ}\text{C}$). These dissimilar values are set forth in the "Material Selection and Properties" document by Melles Griot, which was cited by the Examiner in the above-mentioned Office Action. *See* "Material Selection and Properties" at p. 18.11. For example, that document itself uses different adjectives to describe the coefficient values of those two materials: that of aluminum is described as "high" while that of steel is described as "lower." That document does **not** say that the two materials have thermal expansion coefficients that are "approximately equal" as required by claim 1, and a person of ordinary skill in the art would not regard those two values as "approximately equal."

8. In conclusion, based on my 15 years of experience in the above-mentioned technology of material science, I am of the opinion that one of ordinary skill in the art would not find it obvious to consider the thermal expansion coefficient of aluminum (*i.e.*, $24 \times 10^{-6}/^{\circ}\text{C}$) to be "approximately equal" to the thermal expansion coefficient of steel (*i.e.*, $11 \times 10^{-6}/^{\circ}\text{C}$ to $17 \times 10^{-6}/^{\circ}\text{C}$).

I declare under penalty of perjury under the laws of the United States of America that all statements made herein of my own knowledge are true and correct, and that all statements made on information and belief are believed to be true and correct.

Date: 14.03.2006



Prof. Dr.-Ing. Frank Krafft